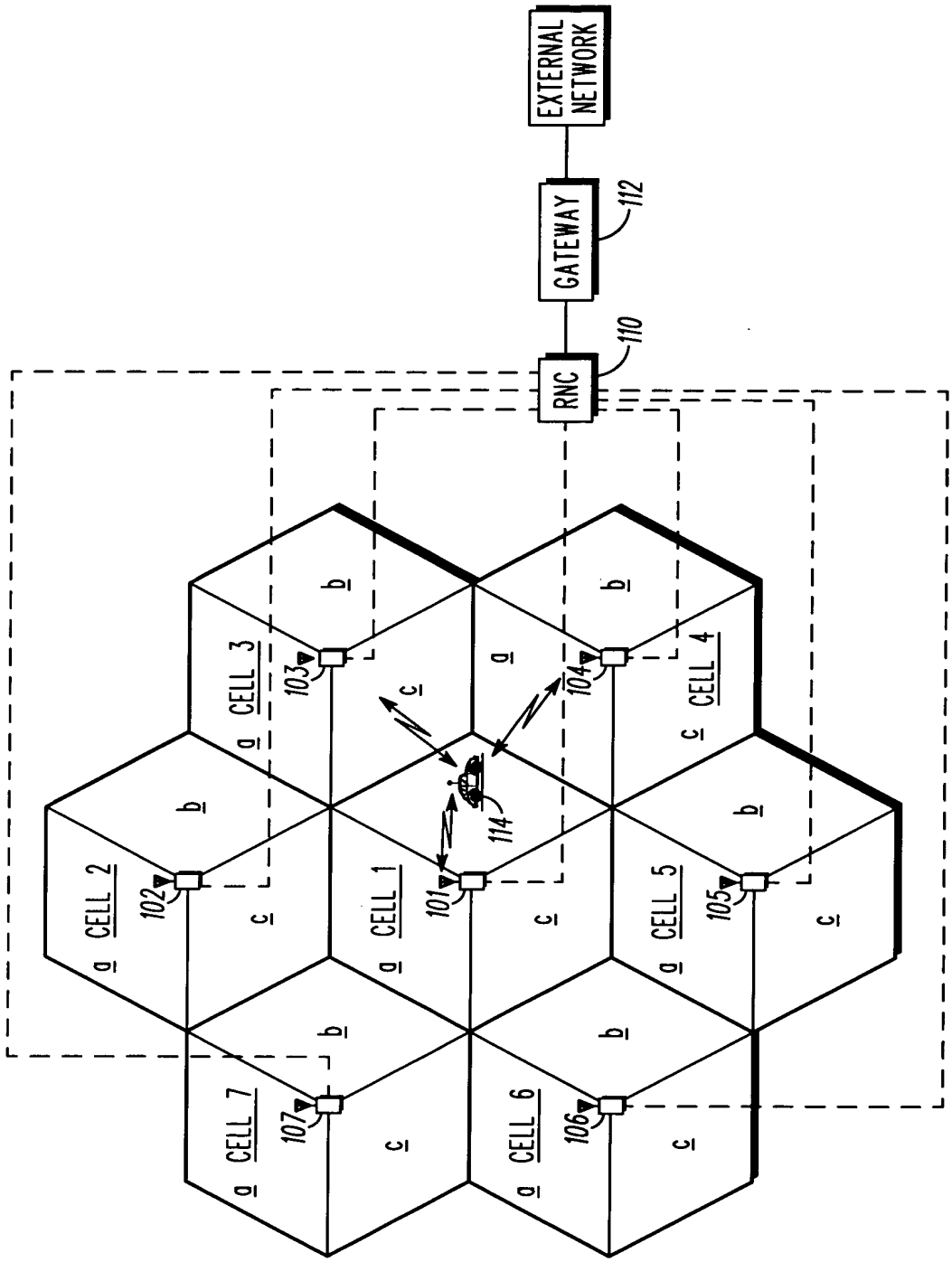
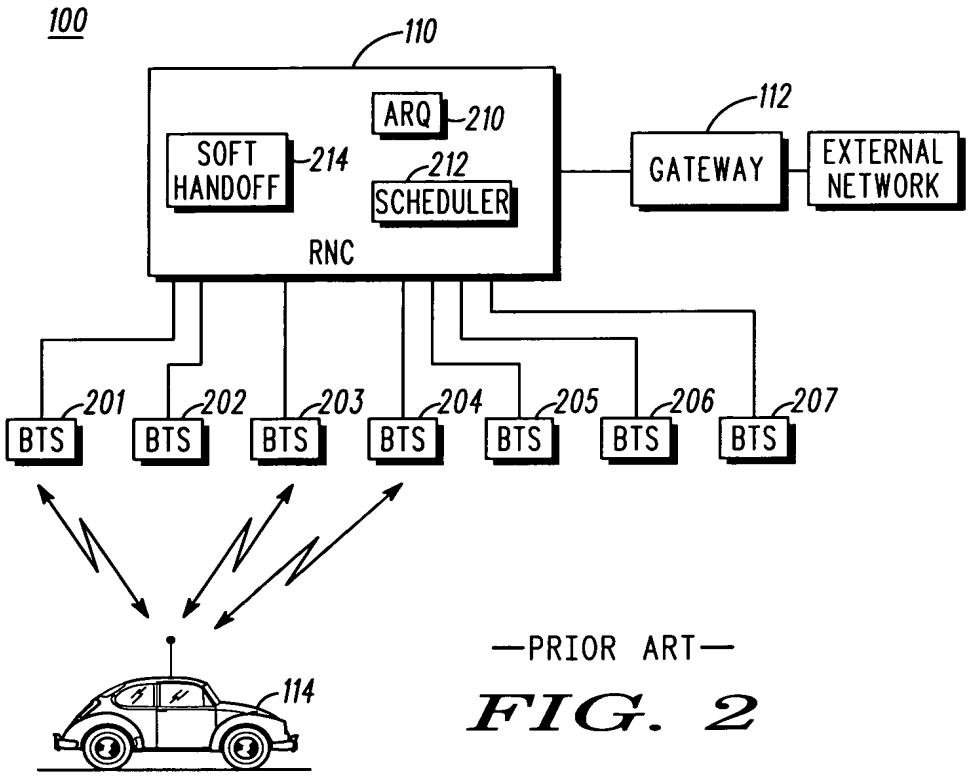

EXTERNAL NETWORK
GATEWAY
112
RNC
110
CELL 1
CELL 2
CELL 3
CELL 4
CELL 5
CELL 6
CELL 7
101
102
103
104
105
106
107
114
a
b
c
100
—PRIOR ART—

FIG. 1



—PRIOR ART—

FIG. 2

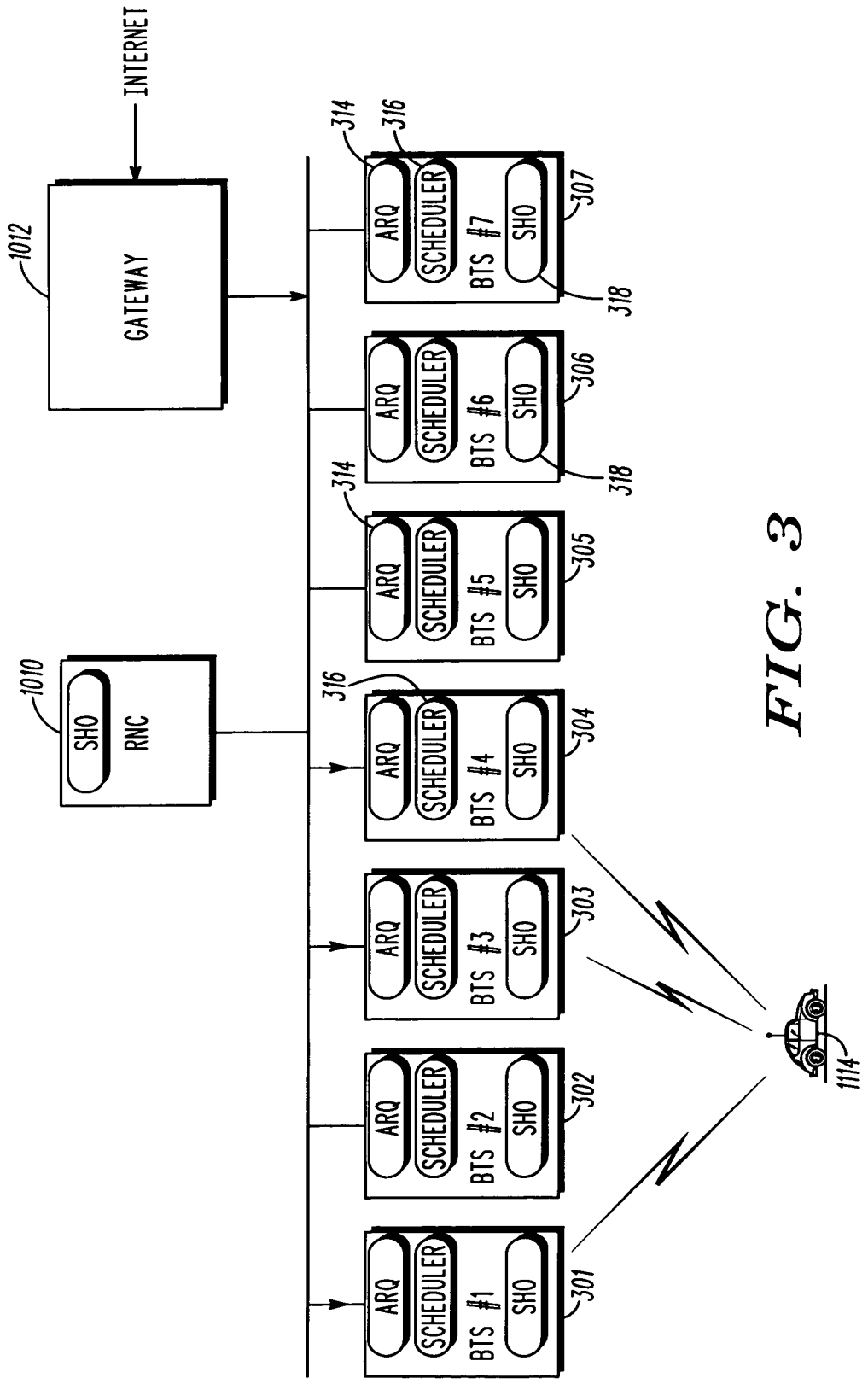

INTERNET
1012
GATEWAY
1010
SHO
RNC
314
316
ARQ
SCHEDULER
BTS #7
SHO
307
318
ARQ
SCHEDULER
BTS #6
SHO
306
318
314
ARQ
SCHEDULER
BTS #5
SHO
305
316
ARQ
SCHEDULER
BTS #4
SHO
304
ARQ
SCHEDULER
BTS #3
SHO
303
ARQ
SCHEDULER
BTS #2
SHO
302
ARQ
SCHEDULER
BTS #1
SHO
301
1114

FIG. 3

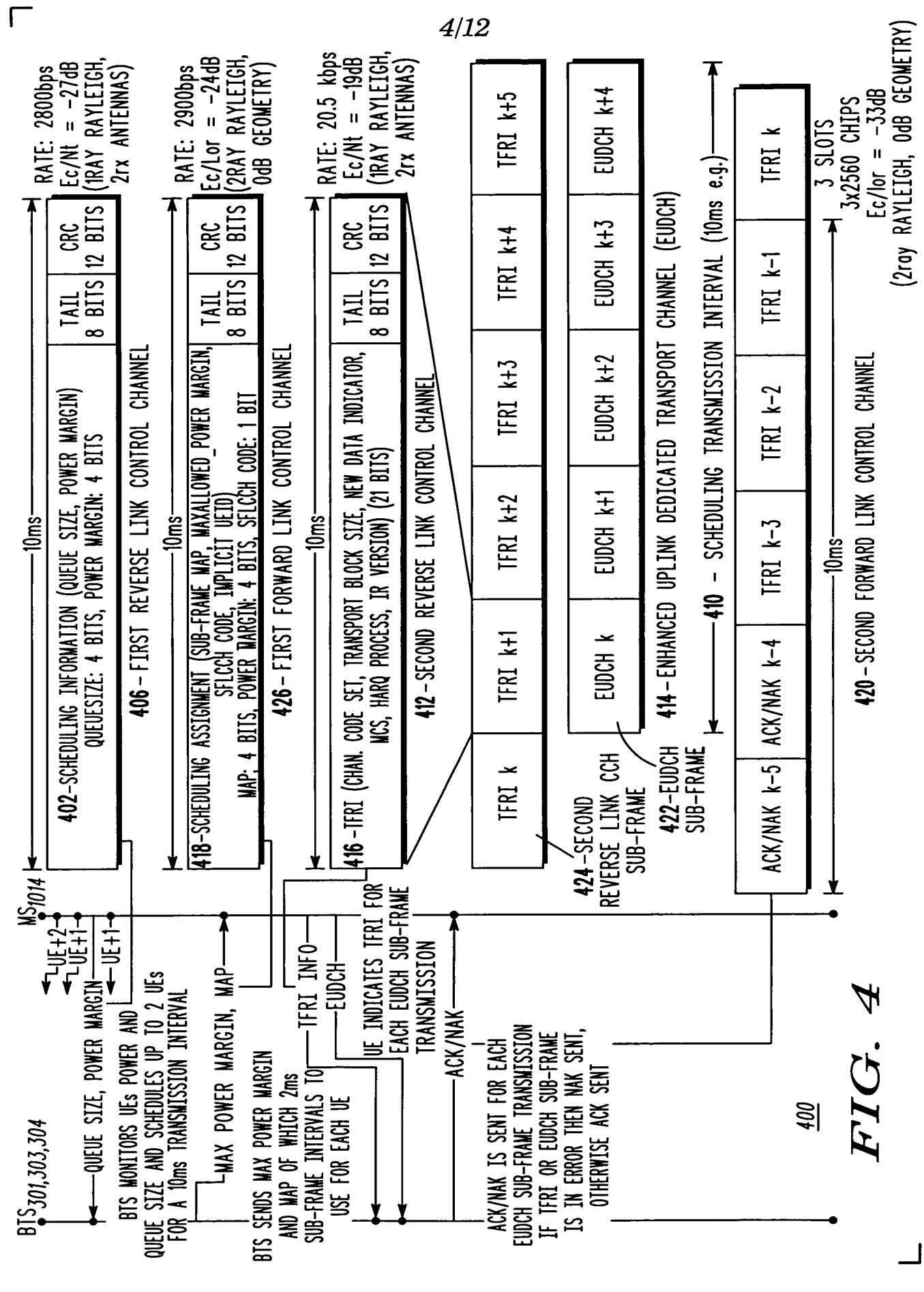

BTS 301,303,304
MS 1014
UE+2
UE+1
UE+1
QUEUE SIZE, POWER MARGIN
BTS MONITORS UEs POWER AND QUEUE SIZE AND SCHEDULES UP TO 2 UEs FOR A 10ms TRANSMISSION INTERVAL
MAX POWER MARGIN, MAP
BTS SENDS MAX POWER MARGIN AND MAP OF WHICH 2ms SUB-FRAME INTERVALS TO USE FOR EACH UE
TFRI INFO
EUDCH
UE INDICATES TFRI FOR EACH EUDCH SUB-FRAME TRANSMISSION
ACK/NAK
ACK/NAK IS SENT FOR EACH EUDCH SUB-FRAME TRANSMISSION IF TFRI OR EUDCH SUB-FRAME IS IN ERROR THEN NAK SENT, OTHERWISE ACK SENT
10ms
402-SCHEDULING INFORMATION (QUEUE SIZE, POWER MARGIN) QUEUESIZE: 4 BITS, POWER MARGIN: 4 BITS
TAIL 8 BITS
CRC 12 BITS
RATE: 2800bps Ec/Nt = -27dB (1RAY RAYLEIGH, 2rx ANTENNAS)
406-FIRST REVERSE LINK CONTROL CHANNEL
10ms
418-SCHEDULING ASSIGNMENT (SUB-FRAME MAP, MAXALLOWED_POWER MARGIN, SFLCCH CODE, IMPLICIT UEID) MAP: 4 BITS, POWER MARGIN: 4 BITS, SFLCCH CODE: 1 BIT
TAIL 8 BITS
CRC 12 BITS
RATE: 2900bps Ec/Lor = -24dB (2RAY RAYLEIGH, 0dB GEOMETRY)
426-FIRST FORWARD LINK CONTROL CHANNEL
10ms
416-TFRI (CHAN. CODE SET, TRANSPORT BLOCK SIZE, NEW DATA INDICATOR, MCS, HARQ PROCESS, IR VERSION) (21 BITS)
TAIL 8 BITS
CRC 12 BITS
RATE: 20.5 kbps Ec/Nt = -19dB (1RAY RAYLEIGH, 2rx ANTENNAS)
412-SECOND REVERSE LINK CONTROL CHANNEL
TFRI k
TFRI k+1
TFRI k+2
TFRI k+3
TFRI k+4
TFRI k+5
424-SECOND REVERSE LINK CCH SUB-FRAME
EUDCH k
EUDCH k+1
EUDCH k+2
EUDCH k+3
EUDCH k+4
422-EUDCH SUB-FRAME
414-ENHANCED UPLINK DEDICATED TRANSPORT CHANNEL (EUDCH)
410 - SCHEDULING TRANSMISSION INTERVAL (10ms e.g.)
ACK/NAK k-5
ACK/NAK k-4
TFRI k-3
TFRI k-2
TFRI k-1
TFRI k
10ms
3 SLOTS
3x2560 CHIPS
Ec/Ior = -33dB
(2ray RAYLEIGH, 0dB GEOMETRY)
420-SECOND FORWARD LINK CONTROL CHANNEL
400

FIG. 4

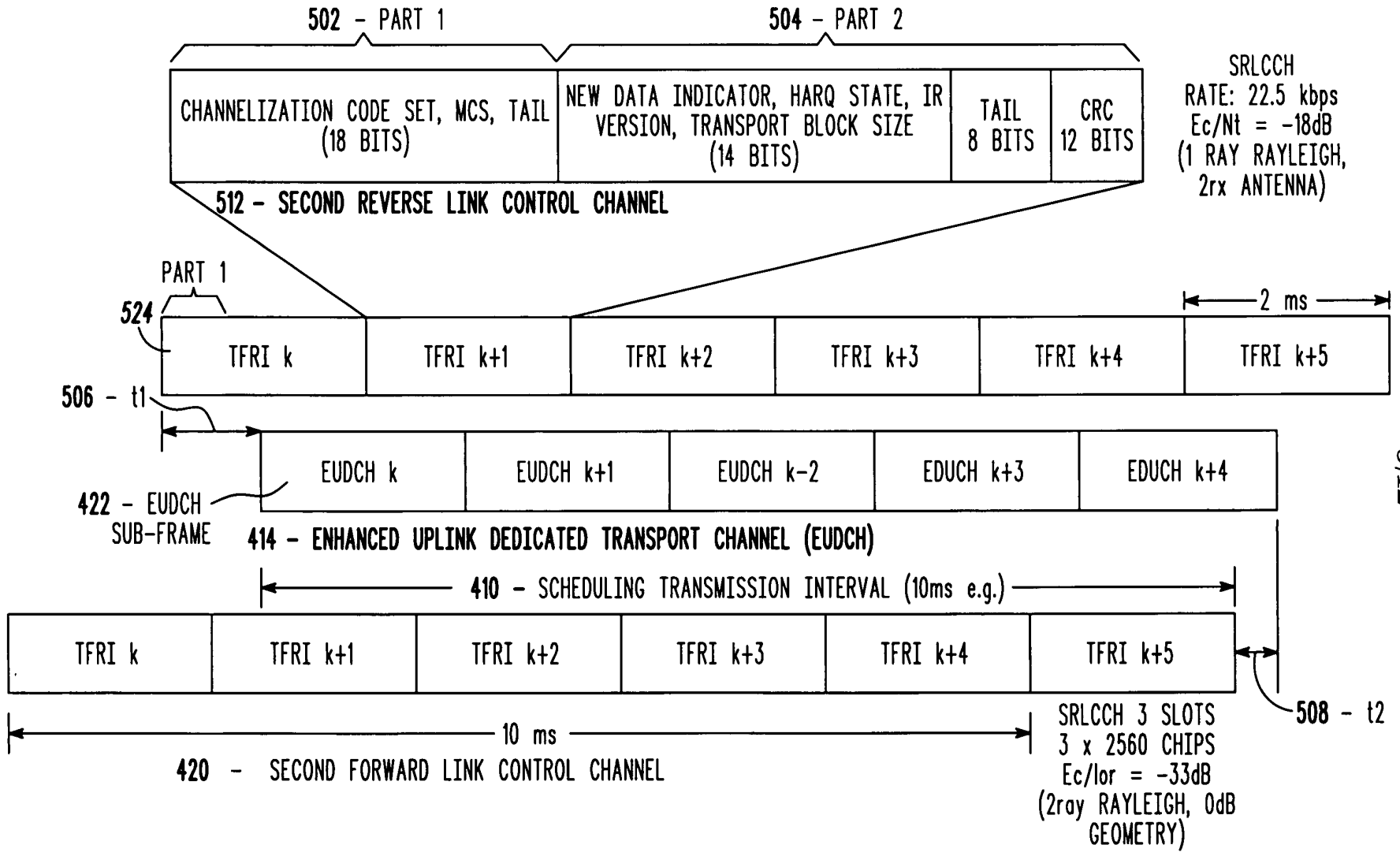


FIG. 5A SECOND REVERSE LINK CONTROL CHANNEL WITH FIRST AND SECOND PARTS

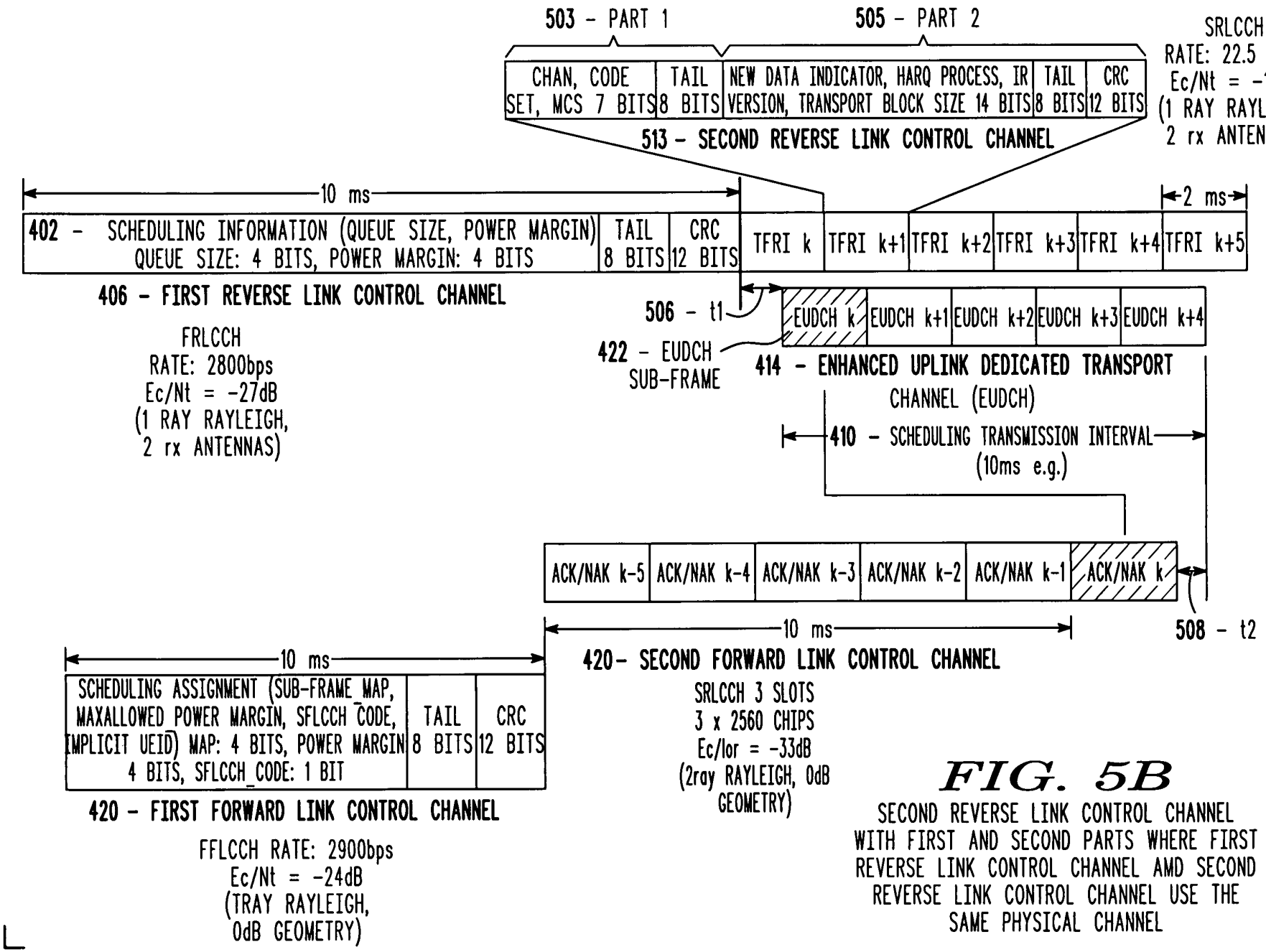


FIG. 5B

SECOND REVERSE LINK CONTROL CHANNEL WITH FIRST AND SECOND PARTS WHERE FIRST REVERSE LINK CONTROL CHANNEL AMD SECOND REVERSE LINK CONTROL CHANNEL USE THE SAME PHYSICAL CHANNEL

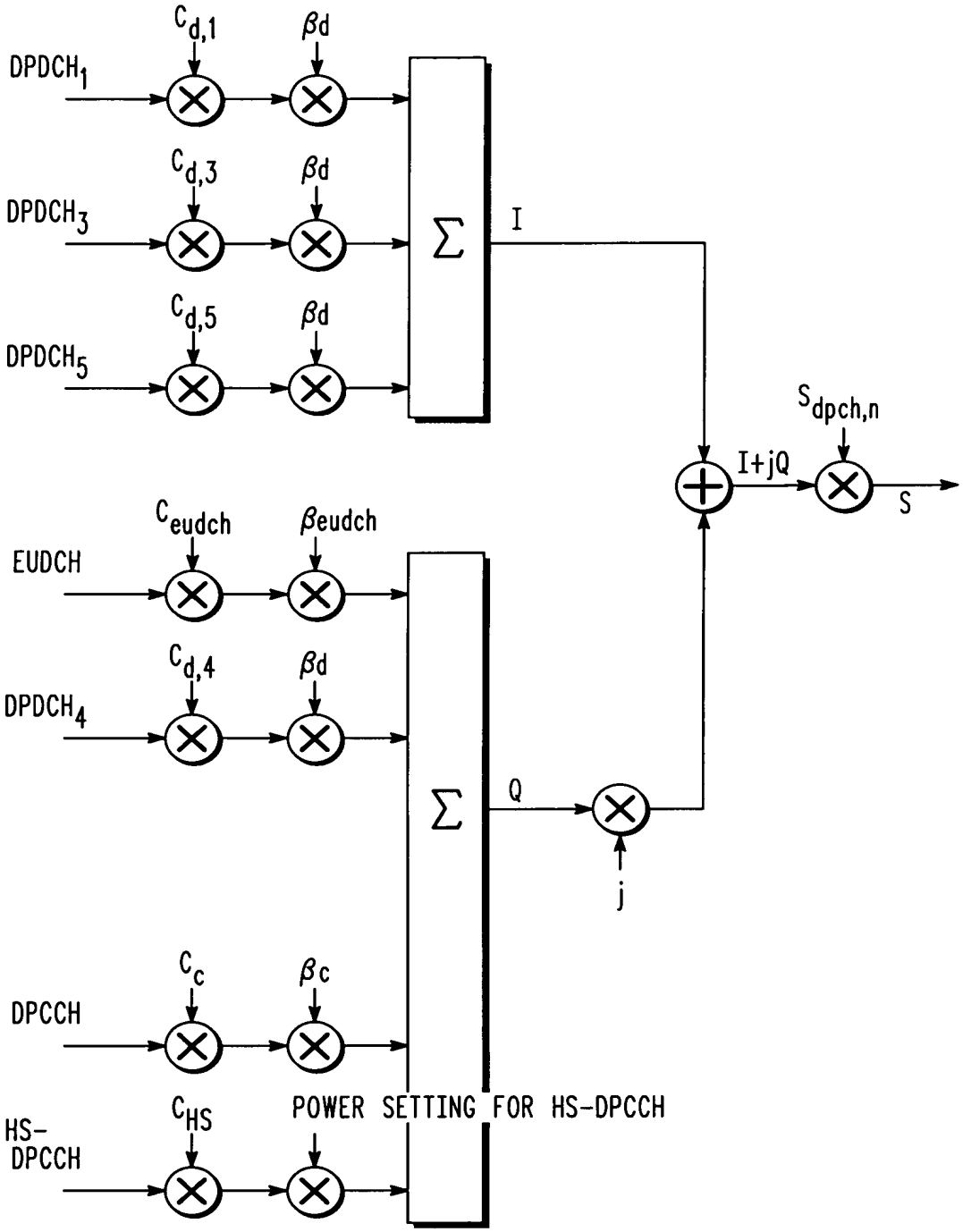


FIG. 6

EXAMPLARY CONFIGURATION OF SPREADING FOR REVERSE LINK (OR UPLINK) DPCCH, DPDCHs, AND EUDCH AND ASSOCIATED REVERSE LINK CONTROL CHANNELS

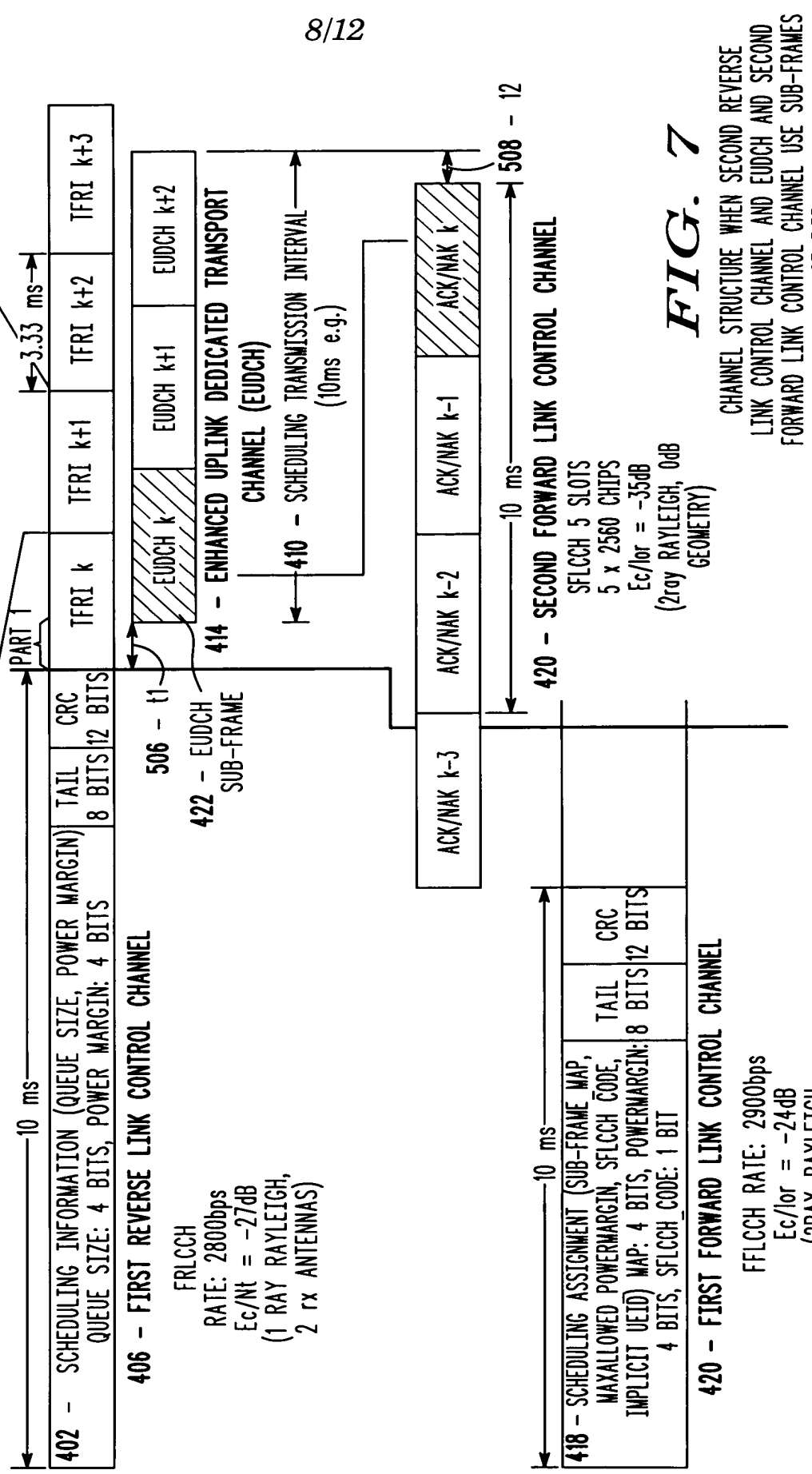


FIG. 7

CHANNEL STRUCTURE WHEN SECOND REVERSE LINK CONTROL CHANNEL AND EUDCH AND SECOND FORWARD LINK CONTROL CHANNEL USE SUB-FRAMES OF 3.33ms

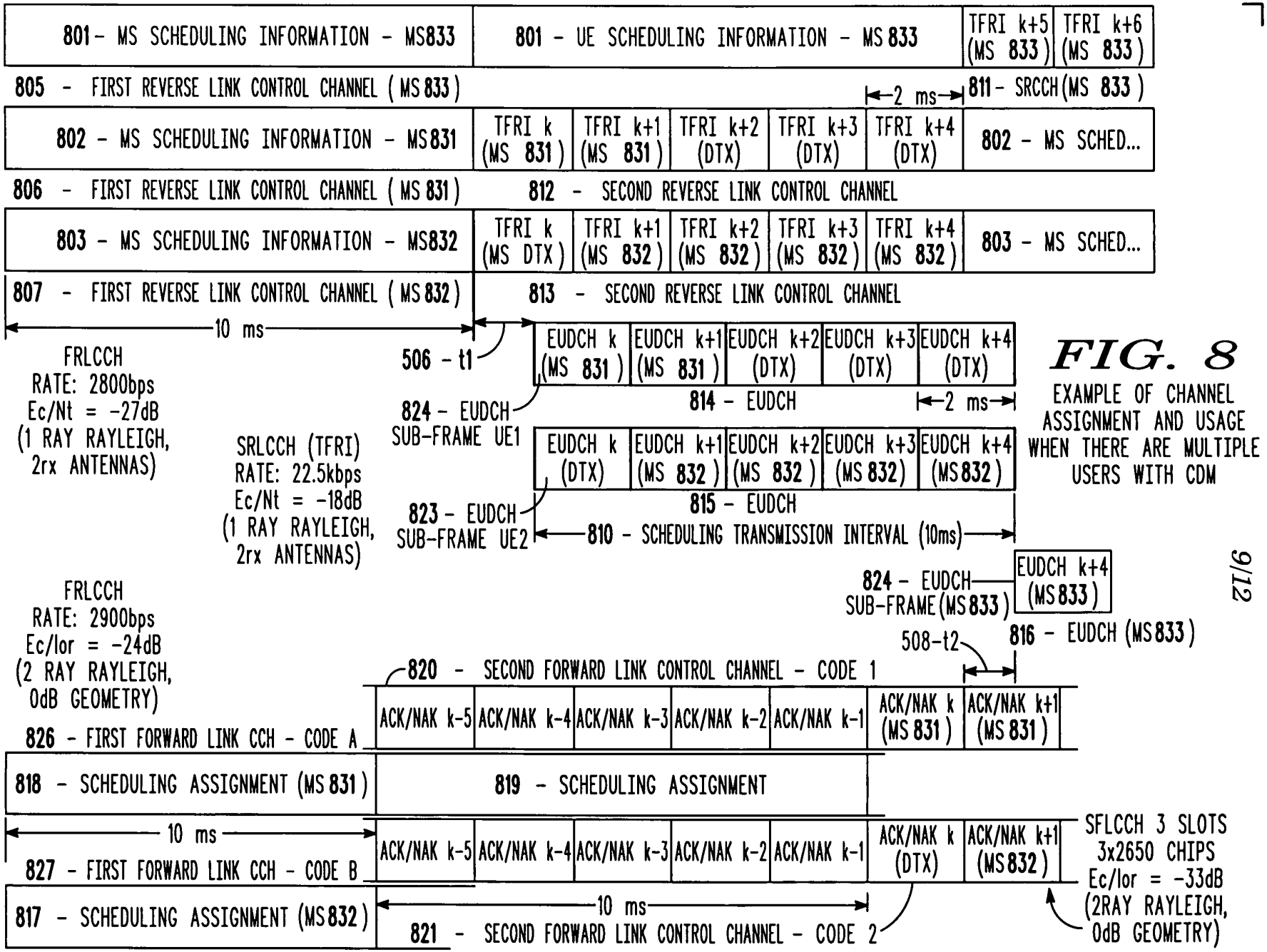
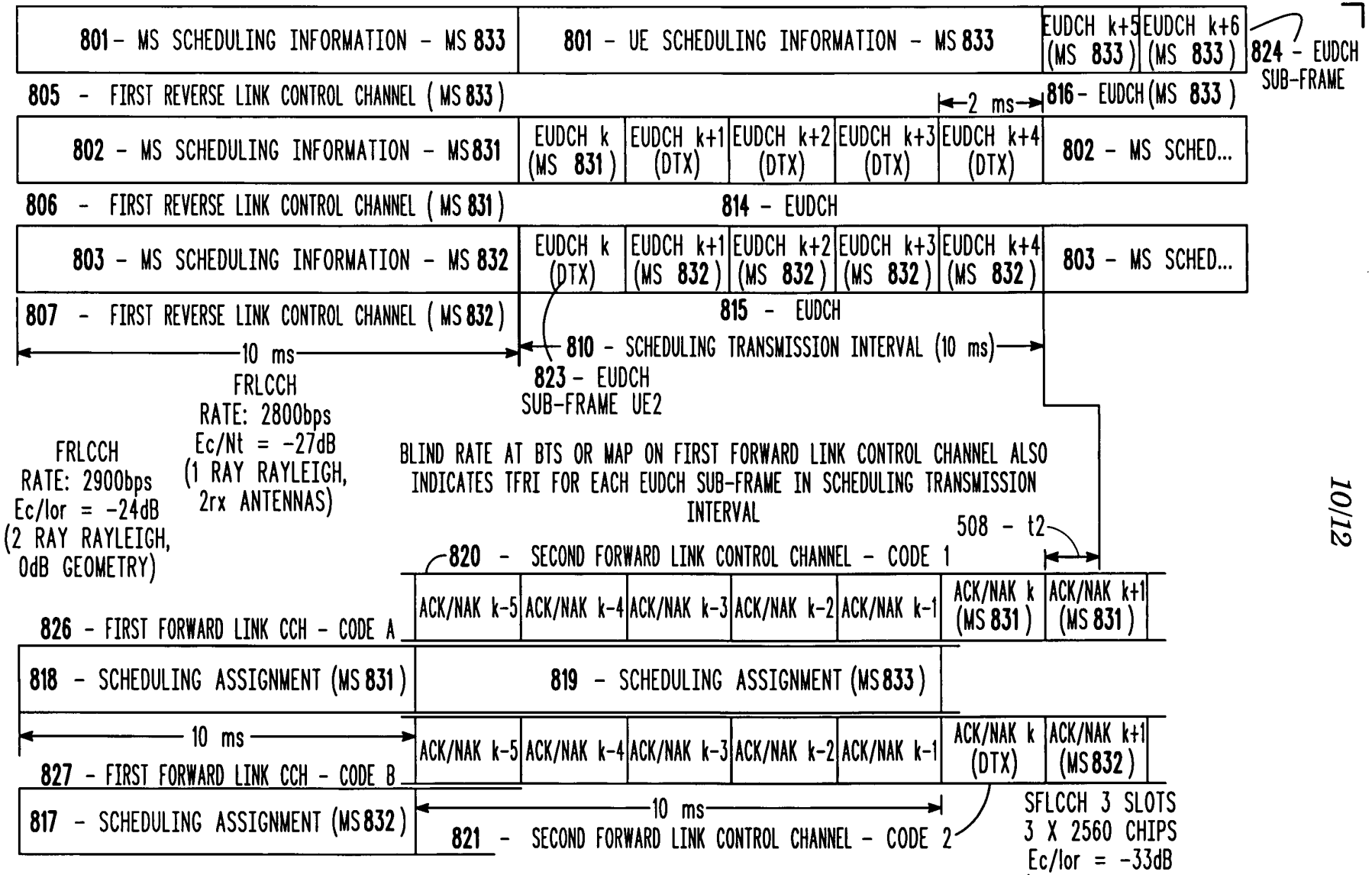


FIG. 8

EXAMPLE OF CHANNEL ASSIGNMENT AND USAGE WHEN THERE ARE MULTIPLE USERS WITH CDM



EXAMPLE OF CHANNEL ASSIGNMENT AND USAGE WHEN THERE ARE MULTIPLE USERS WITH CDM WITHOUT THE USE OF A SECOND REVERSE LINK CONTROL CHANNEL SUCH AS WOULD OCCUR WHEN BLIND TFRI DETECTION IS USED AT THE SERVING BTS OR IF TFRI IS ASSIGNED BY THE SERVING BTS FOR EACH EUDCH SUB-FRAME IN WHICH CASE EUDCH SOFT HANDOFF IS NOT SUPPORTED

FIG. 9

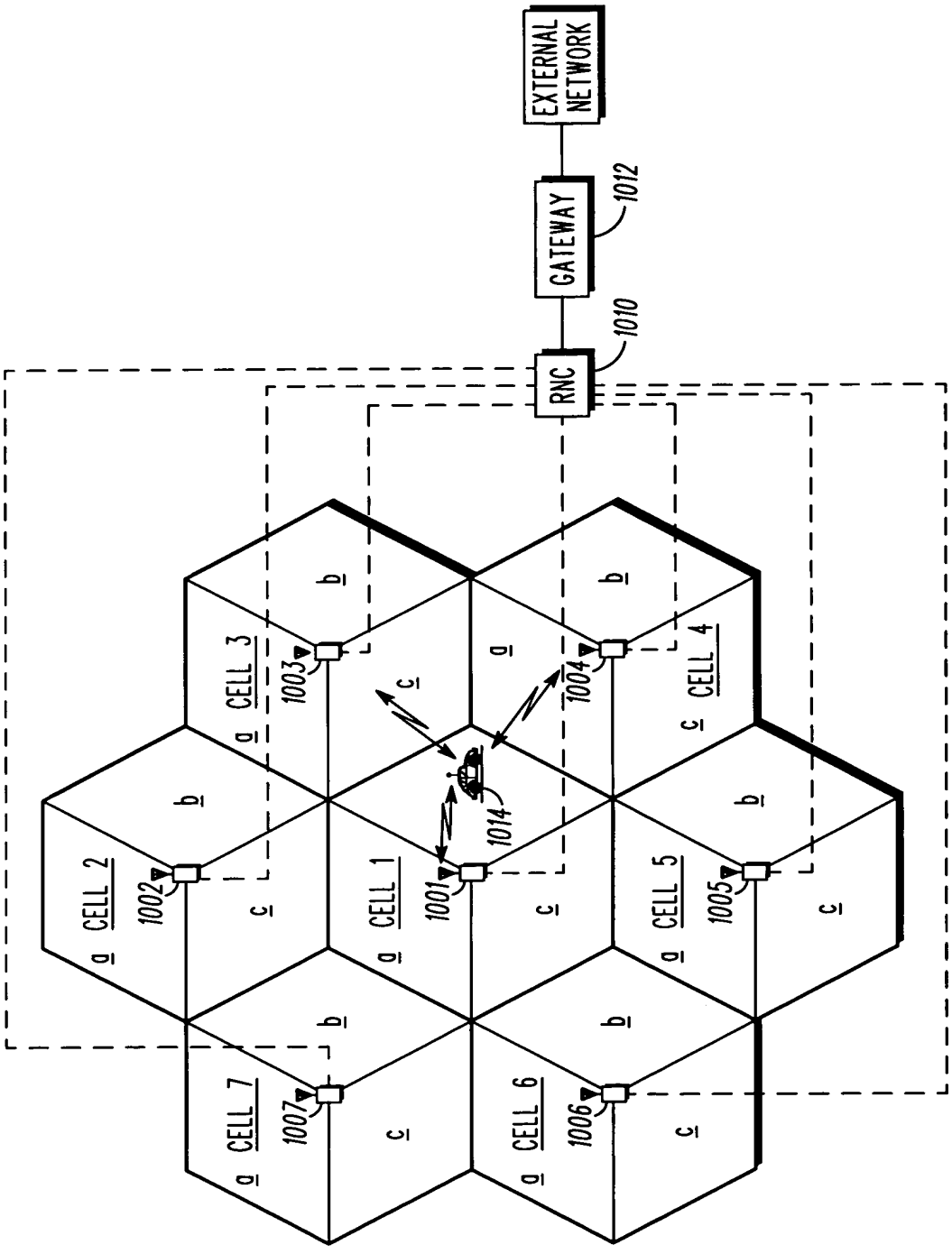

EXTERNAL NETWORK
GATEWAY
1012
RNC
1010
CELL 1
1001
CELL 2
1002
CELL 3
1003
CELL 4
1004
CELL 5
1005
CELL 6
1006
CELL 7
1007
1014
a
b
c
1000

FIG. 10

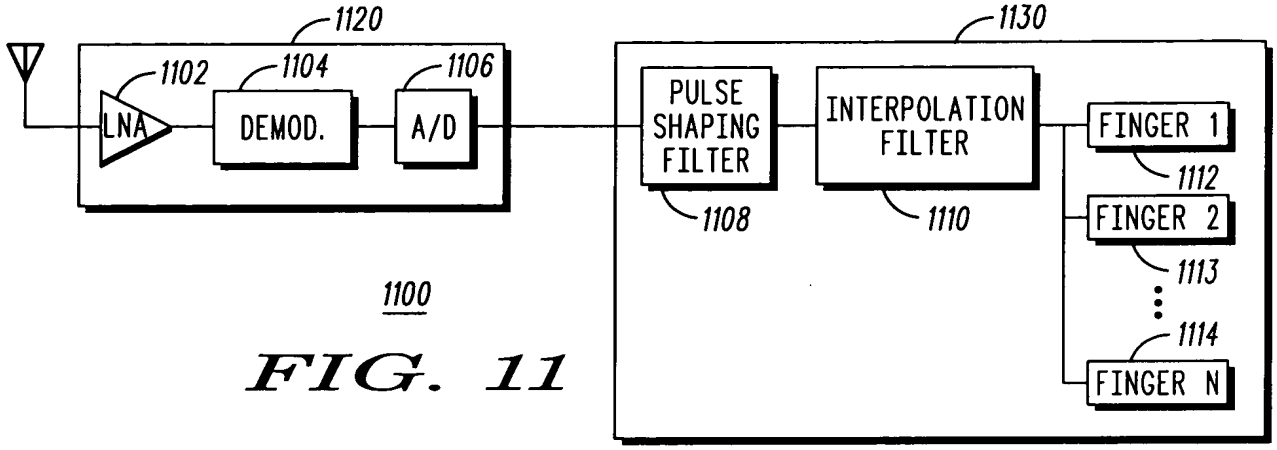


FIG. 11

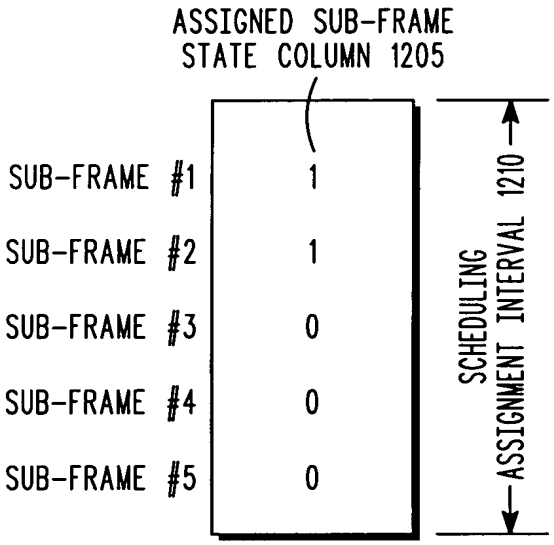


FIG. 12

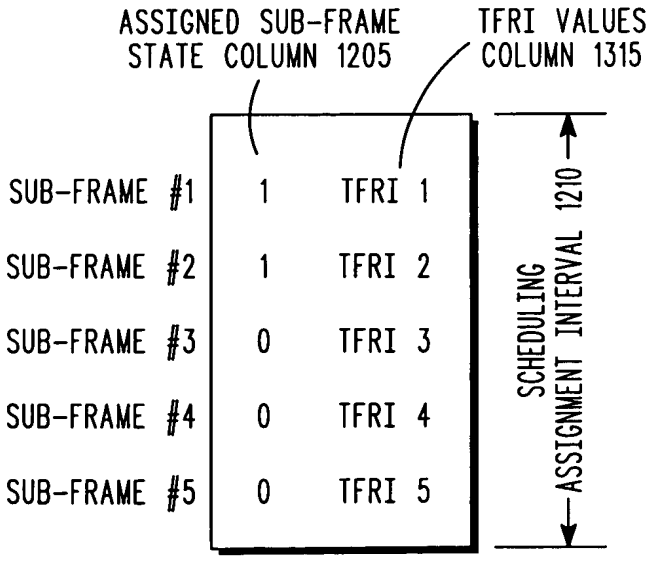


FIG. 13